

REMARKS

After entry of the present Amendment, claims 1, 4, 6, 9, and 10 remain in the application, with claims 1 and 6 in independent form. By the present Amendment, claims 1, 4, and 6 have been amended. Also through the present Amendment, claim 10 has been added. Claims 2-3, 5, and 7-8 were previously cancelled. No new matter has been added.

To explain the amendments to independent claims 1 and 6, claim 1 has been amended to claim the amount of compound (i) set forth on page 8, lines 33-36 of the application as filed. Claims 1 and 6 have also been amended to specify that unsaturated functionality of compound (i) is either 1) reacted with primary and/or secondary amines in the polyurethane foam, or remains unreacted and available for reaction with primary and/or secondary amines, i.e., primary and/or secondary amino groups, in the polyurethane foam. Referring to page 4, lines 24 and 25, the compounds (i) are employed in the polyurethane foam to react with amino groups, which clearly provides support for claim language that specifies the state of unsaturated functionality of compound (i) as being either reacted with such amino groups or unreacted and available for reaction of such amino groups.

Claims 1, 4, 6, and 9 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,114,402 to Smith. Claims 1, 4, 6, and 9 also stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,668,187 and its equivalent, Japanese Patent Pub. No. JP06336513, both to Asako et al. (hereinafter referred to as “the Asako references”). Claims 1, 4, 6, and 9 also stand rejected under 35 U.S.C. §102(a) over U.S. Patent No. 6,495,611 to Arlt et al.

The Applicants respectfully assert that in view of the present Amendment, the rejections over Smith and the Asako references are overcome. Further, the Applicants

respectfully assert that Arlt et al. is not available as prior art because the instant application has an earliest priority date of April 30, 1999, which is earlier than the earliest date at which Arlt et al. is effective as prior art (and which is even earlier than the earliest priority date of Arlt et al.). Further, the Applicants note that the PCT filing date of the instant application is April 17, 2000, which is also earlier than the earliest date at which Arlt et al. is effective as prior art.

To explain the effect of the amendments to claims 1 and 6, by claiming the amount of compound (i) used in claims 1 and 6, and by claiming the state of the unsaturated functionality of compound (i), claims 1 and 6 each essentially claim **threshold amounts** of unsaturated functionality that is either 1) reacted with a primary and/or secondary amine or 2) unreacted and available for reaction with primary and/or secondary amine.

To support the Applicants' position that the rejections over Smith and the Asako references are overcome, a summary of the teachings of Smith and the Asako references may be beneficial. Smith can be summarized as teaching reaction of hydroxyethyl acrylate (HEA) with isocyanate during production of a polyurethane foam. Smith teaches further reaction of an unsaturated portion of the HEA with a monomer-containing unsaturated polyester resin composition. The Asako references teach use, as a blowing agent, of an aqueous polymer emulsion comprising a polymer of ethylenically unsaturated monomers in the preparation of polyurethane foam. HEA is one of monomer that can be used to make the aqueous polymer emulsion.

Clearly, neither Smith nor the Asako references teach leaving unsaturated functionality in the products covered by those references, and neither of those references specifically teach polyurethane foam comprising products of the reaction of primary and/or secondary amines with unsaturated functionality.

With regard to at least the Asako references, the Examiner has taken the position that residual unreacted monomer, i.e., monomers having unreacted unsaturated functionality, would remain in the reactive mixtures such that the products and processes of Applicants' claims are inherently met by the teachings of the Asako references, and that residual amounts are additionally seen to fall within the lower endpoint values of Applicants' claim 4 which is seen to be a value met by "negligible" amounts. As the Examiner is aware, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. Rather, to establish that a result or characteristic is inherent in the prior art, it must be clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. See MPEP 2112(IV.).

In view of the amounts of compound (i) now claimed for use in amended claims 1 and 6, as well as the amounts now claimed for use in amended claims 4 and 10, the Applicants respectfully assert that these amounts of compound (i) are not negligible amounts and, therefore, are not anticipated by, nor rendered obvious by, any residual amount of monomers having unsaturated functionality that remains in the reactive mixtures of the Asako references. In particular, because the Asako references teach use of an aqueous polymer emulsion, the presence of any "residual" unreacted monomer is clearly undesirable, and specific such amounts are not addressed by the Asako references. Further, once the aqueous polymer emulsions of the Asako references are used for blowing the resulting polyurethane foam, the amount of any residual unreacted monomer present in the polyurethane foam will be even further diminished because the aqueous polymer emulsion itself may only be present in the resulting polyurethane foam in residual amounts, if present at all. Thus, the Examiner cannot

establish that the amounts of compound (i) claimed in claims 1 and 6, and the resulting amount of unsaturated functionality present due to the use of the claimed amount of compound (i) are necessarily present in the composition taught by the Asako references.

Likewise, in terms of Smith, the Examiner is also relying on the presence of residual unsaturated functionality in the resulting product to anticipate claims 1 and 6. More specifically, because unsaturated functionality of the HEA in the composition of Smith is reacted with a monomer-containing unsaturated polyester resin composition, the composition of Smith, at best, includes residual levels of unreacted unsaturated functionality. As with the Asako references, because Smith teaches further reaction of the unsaturated functionality with the monomer-containing unsaturated polyester resin composition, the presence of any “residual” unreacted monomer is clearly undesirable, and specific such amounts of unreacted unsaturated functionality are not taught by Smith. Such residual levels clearly cannot rise to a level sufficient to anticipate or render obvious the amounts claimed in claims 1 and 6. This is especially true given the disparate purposes for the presence of unsaturated functionality in the present invention and in Smith. Thus, the Examiner cannot establish that the amounts of compound (i) claimed in claims 1 and 6, and the resulting amount of unsaturated functionality present due to the use of the claimed amount of compound (i) are necessarily present in the composition taught by Smith.

In view of the foregoing, the Applicants respectfully assert that the present claims, as amended, are both novel and non-obvious in view of the prior art relied upon by the Examiner. As such, the Applicants respectfully submit that the claims, as amended, are now in condition for allowance and respectfully request such allowance.

This Amendment is being filed with the appropriate fee for a 3-month extension of time, and it is believed that no further fees are presently due. However, the Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys, P.C., for any fees or credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS

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Date

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